Patent claims

1. An apparatus for checking bank notes for their state of use, in particular dirt and stains which can impair the service value of the bank notes, with a transport device for transporting bank notes along a transport path, characterized in that sensor and illumination units (10, 11, 13; 20, 21, 23) of the same kind are disposed on both sides of the transport path, the sensor and illumination units (10, 11, 13; 20, 21, 23) being focused on a single place.

2. An apparatus according to claim 1, characterized in that it has two illumination units (10, 11, 20, 21) of different wavelength or wave ranges which are operated alternately.

3. An apparatus according to claim 1 or 2, characterized in that the sensors (13, 23) are a linear arrangement of a plurality of individual sensors or sensor arrays which are disposed perpendicular to the transport path.

4. An apparatus according to claim 3, characterized in that a linear arrangement of gradient lenses (14, 24) is provided before the sensors (13, 23) in order to produce a one-to-one image of the bank notes to be investigated on the sensors (13, 23).

5. An apparatus according to any of claims 1 to 4, characterized in that the apparatus is checked for soiling at times when no bank note is being checked.

6. A method for checking bank notes for their state of use, in particular dirt and stains which can impair the service value of the bank notes, wherein bank notes are transported along a transport path, characterized in that each bank note is illuminated on both sides simultaneously at the same place with light of the same wavelength or wave ranges and the same intensity, using light of different wavelength or wave ranges alternately in time, and the light diffusely reflected by both sides of each bank note is evaluated for checking the state of use of each bank note.

7. A method according to claim 6, characterized in that areas of the bank note are evaluated at different resolution for checking the state of use of each bank note.

8. A method according to claim 7, characterized in that the areas of different resolution of each bank note are fixed in accordance with the currency and denomination.

9. A method according to any of claims 6 to 8, characterized in that one-dimensional evaluation along the transport direction of the bank note is performed for checking the state of use of each bank note.